

Work Order ID 60314

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Thursday, July 01, 2010 1:13:26 PM

Item ID:	D6101-007		Accept		Setup	Start		
Revision ID:								
Item Name:	Saddle Billet					Stop		
Start Date:	7/1/2010	Start Qty:	40.00					
Required Date:	7/8/2010	Req'd Qty:	40.00		Cust Item ID:			
Reference:					Customer:			
Approvals:	Process Plan:	<i>H</i>	Date: <i>10/7/11</i>	Tooling:	Date:	Run	Start	
	QC:		Date: _____	SPC (Y/N):	Date: _____	Stop		

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								

D6101	Rev B
-------	-------

100 0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: *102204*

- a) Description: Aluminum billet
- b) 7.750" x 8.250" x 2.50" thick
- c) Tolerance on all dimensions are +0.030"/-0.000"
- d) Grain direction along 7.750" length
- e) Material: 7075-T7351 (QQ-A-250/12)
- f) Material certification required

C2 10/7/11 40

110

Receive & Inspect for Damage & Mat'l Certs

0.00

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

10/7/11 40

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 60314

Thursday, July 01, 2010 1:13:26 PM



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Item ID: D6101-007

Accept



Setup Start

**Revision ID:****Item Name:** Saddle Billet

Stop

**Start Date:** 7/1/2010 **Start Qty:** 40.00**Cust Item ID:****Required Date:** 7/8/2010 **Req'd Qty:** 40.00**Customer:****Reference:****Approvals:****Process Plan:** _____**Date:** _____**Tooling:** _____**Date:** _____

Run Start

**QC:** _____**Date:** _____**SPC (Y/N):** _____**Date:** _____

Stop

**Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

120



QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

MF 10/07/19

40 0

130



Packaging

Packaging

Identify as per dwg & Stock Location: MAT 0.00

0.00

MF 10-7-20

140



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

J 10/07/20

MF 10-7-20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 01, 2010 1:13:30 PM

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Work Order ID: 60314



Parent Item: D6101-007



Parent Item Name: Saddle Billet

Start Date: 7/1/2010

Required Date: 7/8/2010

Start Qty: 40.00

Required Qty: 40.00

Comments: IPP A: 01.05.04 New Issue EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D6101-007P		Purchased		No		110	Each	0.0000	1	40			100 10 10/11/10 (40)
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7075-T7351 8.25X7.75X2.5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

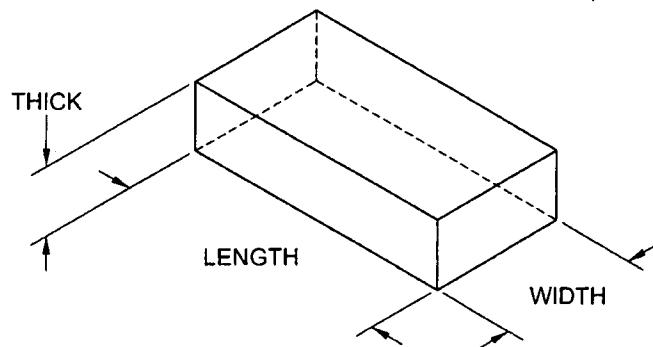
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

B

*Mark
10/07/19*

RELEASED
09/07/15/W

*C4101711
W10: 60314*

B	ADDED D6101-015-017, ADD ASTM B209		RF	09.04.23
A	NEW ISSUE		CP	01.03.30
REV.	DESCRIPTION			BY DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN	RF	DRAWING NO.	D6101	REV. B SHEET 1 OF 1
CHECKED	<i>PA</i>	TITLE	SADDLE BILLET, 7075	
MFG. APPR.	<i>PA</i>	SCALE	NTS	
APPROVED	<i>PA</i>	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		
DE APPR.	<i>PA</i>			
DATE	09.04.23			



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO12204**

Purchase Order Date 7/01/10
PO Print Date 7/01/10

Page Number 1 of 1

Order From: VC-MET001

METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name	Buyer	Chantal Lavoie
Vendor Phone	Requisition Nbr	
Vendor Fax	Tax Resale Nbr	10127-2607
Vendor Account Nbr	Terms	Net 30
	Currency	CAD
	FOB	

Ship To: DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED
(7/10/10)

e-mail

Line Nbr	Reference Revision ID	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6101-007P	7075-T7351 8.25X7.75X2.5	7/16/10	40.00 Yes	Yours ppd Each	\$79.2800	\$3,171.20

Special Inst: AS PER DWG D6101 REV. B
B60314
SIZE: 7.750" X 8.250" X 2.50" THICK
TOLERANCE ON ALL DIMENSION ARE
+0.030"/-0.000"
GRAIN DIRECTION ALONG 7.750"
LENGTH
MATERIAL: 7075-T7351 (QQ-A-250/12)

PO Total: \$3,171.20

✓
006719

MATERIAL CERTIFICATION
REQD UPON DELIVERY

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

Change Nbr: 1

Change Date: 7/01/10



Castle Metals®

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Shipment No:412213

Ship From:	Sold To:	Ship To:	Deliver To:	
Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7	DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped	F.O.B.	Freight Terms	Carrier	BOL No
15-JUL-10	ORIGIN	Prepaid	MANITOULIN	412213-2

Shipment Details	Final Destination Branch - MON
------------------	--------------------------------

Order No	Line No	Item No	Description				
852276	1	6879.MO	2.5000.PL.7075.T7351.ALUMINUM.48.5000.144.5000 CUT RECTANGLE TO 8.25 IN (+ .0620/- .0000 IN (GRAIN TO RUN ALONG 7.75")) X 7.75 IN (+ .0620/- .0000 IN (GRAIN TO RUN ALONG 7.75")) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12				
Purchase Order No	Part Number	Ordered Qty	Invoice Qty				
P012204		40 PCS	40 PCS				
Details	Mill	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty (LBS)
Delivery No.							
34330312		407251		4			66.13
34330312		485715A7		12			198.38
34330312		422799A7		24			396.76

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

AmL 10/07/19

CERTIFIED INSPECTION REPORT

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described herein, including any specifications forming a part of the description and that samples representative of the material meet the composition limits and had the mechanical properties shown on the face of this sheet. Per:

Malcolm Murphy
Malcolm Murphy
Director of Manufacturing Davenport Works

Karen P. Young
Karen P. Young
Quality Assurance Manager

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

Ship From: RIVERDALE, IA.

Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item	Page
2009-01-10	3286081	00000	1000062304-1		
P.O. No/Govt Contract No.		Customer	Alcoa Item	Mfg Order	
01-16542			CASTLE A M G04100S634R08	DS-62304-1	

Ship To: A M CASTLE & COMPANY
3400 NORTH WOLF ROAD
BAY #6
FRANKLIN PARK 60131 IL

Item Description
2.5 IN TK (+.0750 -.0750) X 48.5 IN W (+.3125 -.0000) X 144.5 IN LN (+.5 -.0) CAT D 164168 (M) A/T 7075-T7351 RECTANGLE MILL FINISH, USI 3MM DEAD ZONE REQ'D BOTH SIDES, SAWED IAC 6079. EXC_MRK A97075-60 REV 22 AMS-QQ-A-250/12 IS 2007 AMS-STD-2154 EXC_MRK AMS4078 REV G EXC_MRK ASTM-B209 REV 07 ASTM-B594 REV 06 BSS7055 REV A EXC_MRK NMS159 REV N PS21211 REV K ((MARKED)) KRAFT PAPER INTERLEAVED
MAX GROSS SKID WGT: 4500 LB QDMN TOL +/- 25 % USI CL A 3 MM CQR 0137890 REV 17 CUST REQ 08-11-04 *** W/E 09-01-17 ***

Num	Package	Ticket	Lot	Weight	Quantity	UOM	Pc Id/Ser1
1		709656	407251	3545	2	PC	:

Notes for CQR: 0137890.17

PRODUCT PRODUCED TO THE REQUIREMENTS OF ASTM-B2375 ALSO MEET THE REQUIREMENTS OF AMS-STD-2154. PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS-STD-2154 ALSO MEET THE REQUIREMENTS OF ASTM-B2375.

THIS MATERIAL HAS BEEN ULTRASONICALLY INSPECTED FULLY IMMEDIATELY - TYPE I.

PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ-A-250/12 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/12F; PROD UCT PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/12 F ALSO MEETS THE REQUIREMENTS OF AMS-QQ-A-250/12.

Exception to Spec A97075-60; Revision: 22 Issue: Letter dated 2007-05-14 from AHORN, DENNIS T to PLATTER, BARB.

CQR: 0137890.17 -Specification Limits

Temp	Dir	UTS	TYS	EL40
		KSI	KSI	PCT
T7351	Long Transv.	Max	63.9	
		Min	66.0	52.0 6
T7351 Elec. Cond. (EC) & MIN 38.0 PCT				

Chemical Composition	Si	Pb	Cu	Mn	Mg	Cr	Zn	Ti	Other	Other
	Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	Each	Total Aluminum
Alloy 7075	Min	1.2	2.1	0.18	5.1				REMAIN	

dwL 10/07/09

CERTIFIED INSPECTION REPORT

We hereby certify that the material covered by this certificate has been inspected and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Per:

Kenton P. Young
Kenton P. Young
Quality Assurance Manager

Malcolm Murphy
Director of Manufacturing Davenport Works

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

Ship From: RIVERDALE, IA.

993937 Ship Date	0 B.L. No.	Invoice No.	Alcoa No.	Item	Page
2009-01-10	3286081	00000	1000062304-1		2
P.O. No./Govt Contract No.		Customer	Alcoa Item	Mfg Order	
01-16542			CASTLE A M G041005634R08	DS-62304-1	

COR: 0137890.17 -Specification Limits (ccnt.) -----
Lot: 407251 - Mechanical, Physical, Metallography, Quantometer Results -----

Temp	Dir	Test	No->	UTS	TYS	EL40
				KSI	KSI	PCT
T7351	Long Transv.	3		69.8	58.3	10.3
				69.8	58.2	10.4
				69.8	57.8	10.2

T7351 Elect Cond +IACS 40.4 40.7 40.5 PCT

Cast Number	Chemical - OES	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
H9127044	Actuals	0.06	0.29	1.6	0.02	2.5	0.19	5.7	0.02

This material was melted in the United States or a Qualifying Country (REF DFARS 225.872.1(a)), it was manufactured in the United States

CASTLE METALS CORP.
DATE RCV'D. 1/14/09
IAC 0810
APPROVED BY *RTW*

SHIP TO:
 AM CASTLE & CO
 3400 NO. WOLF ROAD
 FRANKLIN PARK, IL 60131

SOLD TO:
 AM CASTLE & CO- SOLD TO
 3400 NO. WOLF ROAD
 FRANKLIN PARK, IL 60131

KAISER
ALUMINUM

Trentwood Works - Spokane, WA 99215
 Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4173294

CUSTOMER PO NUMBER:		WORK PACKAGE:	CUSTOMER PART NUMBER:		SHIP RUN/LOAD ID:		GOV'T CONTRACT NUMBER:
01-23160		6879 A97075-60		101640/19			
KAISER ORDER NO:	LINE ITEM:	SHIP DATE:	ALLOY:	CLAD:	TEMPER:	PRODUCT DESCRIPTION:	
1087294	1	5-OCT-2009	7075	BARE	T7351	Sawed Plate	
WEIGHT SHIPPED:	QUANTITY:	B/L NUMBER:	GAUGE:	DIAMETER/WIDTH:		LENGTH:	
7196 LB	4 PCS EST.	2024315	2.5000 IN	48.500 IN		144.500 IN	

Certified Specifications

AMS 4078/RevG	AMS-QQ-A-250/12	AMS-STD-2154
ASTM B 209/Rev07	ASTM B 594/Rev06	BAC 5439/RevH
BSS 7055/RevA	CMMP 025/RevS	CSTI 006/RevC
DPS 4.713/RevAH	EAC MS1011/RevE	GAMPS 9101/RevB
GSS16100/RevG/Amd1	MMS 159/RevN	PS 21211/RevK

Test Code: 4297

Test Results

Lot: 485532A6 Cast 271

Drop 21

Ingot 1

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.6 : 71.4 (487 : 492)	58.6 : 59.1 (404 : 407)	10.4 : 11.2

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :	40.8 Min	41.3 Max
(MS/M) :	23.7 Min	24.0 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.21	1.5	0.04	2.5	0.19	5.5	0.04	0.01	0.01	TOT 0.05



Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4173294

Lot: 485715A7 Cast 271 Drop 21 Ingot 4

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	71.4 : 72.4 (492 : 499)	59.2 : 60.9 (408 : 420)	11.2 : 11.4

(ASTM E1004)

(EN 2004-1)

Conductivity % IACS :	40.9 Min	41.2 Max
(MS/M) :	23.7 Min	23.9 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.11	0.21	1.5	0.04	2.5	0.19	5.5	0.04	0.01	0.01	TOT 0.05

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

7075-T7351 plate 3.501-4.000" thick, if
ultrasonically inspected, meets requirements of CMMPO25 per
SDR CMMPO25-KaiserT-3. 7075-T7351 plate 4.001-5.000" thick,
if ultrasonically inspected, meets requirements of CMMPO25
per
SDR CMMPO25-KaiserT-2.

Metal represented by this test report was immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF THE DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

BILL POYNOR, LABORATORIES SUPERVISOR

Castle Metals FP

HEAT NUMBER 485715A7
MECHANICAL ID
ITEM CODE 6829
LOT NUMBER
PO NUMBER 17121
RECEIPT DATE 10-12-09
SUPPLIER KAI SFL
SPECIFICATION
LCS 100
COMMENT
APPROVED BJ

smf
10/07/09

SHIP TO:

CASTLE METALS
C/O CUTTER PRECISION METALS
1208 NO. 4TH AVE
KENT, WA 98032

SOLD TO:

AM CASTLE & CO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

KAISER
ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4128061

CUSTOMER PO NUMBER:		WORK PACKAGE:		CUSTOMER PART NUMBER:		SHIP RUN/LOAD ID:	GOV'T CONTRACT NUMBER:
45-24870				6879 A97075-80		101272/3	
KAISER ORDER NO:	LINE ITEM:	SHIP DATE:	ALLOY:	CLAD:	TEMPER:	PRODUCT DESCRIPTION:	
1066098	1	28-APR-2008	7075	BARE	T7351	MILL FINISH PLATE	
WEIGHT SHIPPED:	QUANTITY:	BIL NUMBER:	GAUGE:	WIDTH:	LENGTH:		
7214 LB	4 PCS EST.	2017533	2.5000 IN	48.500 IN	144.500 IN		

Certified Specifications

AMS 4078/RevG

AMS-QQ-A-250/12

AMS-STD-2154

ASTM B 209/Rev07

ASTM B 594/Rev06

BAC 5439/RevH

BSS 7055/RevA

CMMR 026/RevR

CSTI 006/RevC

DPS 4.713/RevAH

EAC MS1011/RevE

GAMPS 9101/RevB

GSS16100/RevG

MMS 159/RevN

PS 21211/RevK

Test Code: 4297

Test Results

Lot: 422797A1 Cast 161 Drop 21 Ingot 2

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.8 : 71.0 (488 : 490)	60.2 : 60.6 (415 : 418)	9.7 : 10.4

(ASTM E1004)

Conductivity %IACS :	41.4 Min	41.6 Max
(MS/M) :	24.0 Min	24.1 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.22	1.6	0.02	2.4	0.19	5.6	0.02	0.01	0.01	TOT 0.03

*ml
10/21/19*

KAISER

ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4128061

Lot: 422799A7 Cast 161 Drop 29 Ingot 2

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.2 : 72.5 (484 : 600)	58.1 : 61.4 (401 : 423)	9.8 : 10.0

(ASTM E1004)

Conductivity %IACS :	40.6 Min	40.9 Max
(MS/M) :	23.5 Min	23.7 Max

(ASTM E1251)

Chemistry:	Si	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.20	1.5	0.02	2.7	0.19	5.7	0.02	0.01	0.01	TOT 0.03

ALLOY LIMITS

Chemistry:	Si	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.16

Aluminum Remainder

TEST NOTES

Metal represented by this test report was immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.

M
10/07/19

CASTLE METALS - KENT			
DATE REC'D	5-2-08	CUST.	
REC'D FROM	KAISER	CUST. P.O.	
APPROVED BY	AM	AMC S/O	
TR # 422799A7/100709A7			
WE HEREBY CERTIFY THAT THESE ARE CORRECT			
COPIES OF REPORTS NOW ON FILE AT A.M. CASTLE & CO.			
BY:	IAC:6879		

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE U.S.A OR CANADA AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

Bill Poyner